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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/686,492 | 10/14/2003 | Wolfgang Fink | 06618-925001 / CIT3783 | 3542 |

28120 7590 01/10/2006

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| EXAMINER | |
|---|---|
| DRYDEN, MATTHEW DUTTON | |
| **ART UNIT** | **PAPER NUMBER** |
| 3736 | |

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/686,492 | FINK ET AL. | |
| | Examiner | Art Unit | |
| | Matthew D. Dryden | 3736 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *14 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/14/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Priority*

The application claims priority back to provisional applications: 60/419014 filed on October 16, 2002 and 60/446403 filed on February 11, 2003.

### *Specification*

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Abita et al (6579235).

Regarding claim 1, Abita et al teaches a passive intraocular pressure sensor that comprises:

A pressure switch that is sized and capable of being configured in the anterior chamber of an eye (see column 10, lines 28-41), which can be viewed as the MEMS coil or sensor (column 6, lines 8-15)

Regarding claim 2, (see column 6, lines 8-15).

Regarding claim 3, the pressure switch of Abita et al is capable of being placed on the iris of the eye.

Regarding claim 4, the pressure switch of Abita et al is capable of being placed on an intraocular lens.

Regarding claim 5, the pressure switch of Abita et al is capable of being placed on a glaucoma tube.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any

inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abita et al in view of Kern (4601545). Abita et al discloses the claimed invention except for the switch being powered by a solar cell system. Kern discloses a device for use with the eye that includes power source that is a solar cell (see Column 1, lines 42-60), to provide a power source that is non-invasive and easy to recharge. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Abita et al with a power system that includes a solar cell, as taught by Kern, to provide a power source that is non-invasive and easy to recharge.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abita et al in view of Kaye et al (5217015). Abita et al discloses the claimed invention except for the switch being battery powered. Kaye et al discloses a pressure-sensing device that incorporates a means for controlling sensing that is powered by a battery (see Claim 11), to provide a constant power source to the user so that readings can be taken over an extended period of time. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Abita et al to include a battery powered

portion, as taught by Kaye et al, to provide a constant power source to the user so that readings can be taken over an extended period of time.

Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abita et al in view of Hedberg (5476484). Abita et al discloses the claimed invention except for the timer that includes two electrodes that monitors when the pressure becomes higher than a predetermined pressure and stops when the pressure goes down below the pressure. Hedberg teaches a device that includes a timing device that is activated when a certain pressure is breached and is deactivated when the pressure falls below the threshold pressure (see Columns 3-4, lines 16-50), so that when the pressure is above a certain level it can be monitored and evaluated, and when the pressure dips below the timer stops timing the duration. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Abita et al with a timer that includes two electrodes and a timer that starts when a threshold pressure is broken, and stops when the pressure dips below the threshold pressure, as taught by Hedberg, so that when the pressure is above a certain level it can be monitored and evaluated, and when the pressure dips below the timer stops timing the duration.

Regarding claim 10, the graphs in Figure 17 of Abita et al include time on one axis so this can be viewed as an optical readout from the timer.

Regarding claim 11, the switch of Abita et al can be viewed as resettable.

Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abita et al in view of Hedberg as applied to claim 11 above, and further in

view of Fresco (6524243). Abita et al as modified discloses the claimed invention except for the device comprising an external instrument that has a means for optically activating the optical readout and a means for receiving the optical readout. Fresco teaches a tonometer incorporating an electrical measurement device comprising a means for optically activating an optical readout (the Infra red optical signal which is element 75 in Figure 2) and a means for receiving the optical readout (which can be viewed as display device 92 in Figure 1), to provide the system with a non-invasive way of activating the optical readout that is relatively easy to use and monitor. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the device Abita et al with an external instrument that has a means for optically activating the optical readout and a means for receiving the optical readout, as taught by Fresco, to provide the system with a non-invasive way of activating the optical readout that is relatively easy to use and monitor.

Regarding claim 14, the device as modified would be able to monitor the ambient atmospheric pressure, (see columns 12-14, lines 58-62 of Abita et al).

Regarding claim 15, the device as modified is capable of powering the device of claim 11.

Regarding claim 16, see Abita et al column 9, lines 46-56.

Claims 17-22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abita et al in view of Uchiyama (4476876). Abita et al discloses the claimed invention except for a second pressure switch that is activated when a second threshold pressure is determined. Although not

explicitly taught by Abita et al, the specification suggests that more than one threshold pressure is monitored by the switch (see columns 11-12, lines 60-6). Uchiyama teaches a pressure detecting system that has two separate threshold detecting switches (see column 3, lines 6-53), to provide the system with two separate threshold-monitoring pieces, which helps determine the severity of the intraocular pressure. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Abita et al with multiple threshold pressure sensing devices, as taught by Uchiyama, to provide the system with multiple threshold-monitoring pieces, which helps determine the severity of the intraocular pressure.

Regarding claim 19, the pressure sensor of Abita et al can be a MEMS sensor (see column 8, lines 39-61).

Regarding claim 20, the pressure sensor of Abita et al is capable of being placed on the iris.

Regarding claim 21, the pressure sensor of Abita et al is capable of being placed on an intraocular lens.

Regarding claim 22, the pressure sensor of Abita et al is capable of being placed on a glaucoma tube.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abita et al in view of Uchiyama as applied to claim 17 above, and further in view of Kern. Abita et al as modified discloses the claimed invention except for the switch being powered by a solar cell system. Kern discloses a device for use with the eye that includes power source that is a solar cell (see Column 1, lines 42-

60), to provide a power source that is non-invasive and easy to recharge. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Abita et al with a power system that includes a solar cell, as taught by Kern, to provide a power source that is non-invasive and easy to recharge.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abita et al in view of Uchiyama as applied to claim 17 above, and further in view of Kaye et al. Abita et al as modified discloses the claimed invention except for the switch being battery powered. Kaye et al discloses a pressure-sensing device that incorporates a means for controlling sensing that is powered by a battery (see Claim 11), to provide a constant power source to the user so that readings can be taken over an extended period of time. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Abita et al to include a battery powered portion, as taught by Kaye et al, to provide a constant power source to the user so that readings can be taken over an extended period of time.

Claims 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abita et al in view of Uchiyama as applied to claim 17 above, and further in view of Hedberg. Abita et al as modified discloses the claimed invention except for the timer that includes two electrodes that monitors when the pressure becomes higher than a predetermined pressure and stops when the pressure goes down below the pressure. Hedberg teaches a device that includes a timing device that is activated when a certain pressure is breached and is deactivated

when the pressure falls below the threshold pressure (see Columns 3-4, lines 16-50), so that when the pressure is above a certain level it can be monitored and evaluated, and when the pressure dips below the timer stops timing the duration. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Abita et al with a timer that includes two electrodes and a timer that starts when a threshold pressure is broken, and stops when the pressure dips below the threshold pressure, as taught by Hedberg, so that when the pressure is above a certain level it can be monitored and evaluated, and when the pressure dips below the timer stops timing the duration.

Regarding claim 28, the graphs in Figure 17 of Abita et al include time on one axis so this can be viewed as an optical readout from the timer.

Regarding claim 29, the switch of Abita et al can be viewed as resettable.

Claims 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abita et al in view of Uchiyama in view of Hedberg as applied to claim 29 above, and further in view of Fresco. Abita et al as modified discloses the claimed invention except for the device comprising an external instrument that has a means for optically activating the optical readout and a means for receiving the optical readout. Fresco teaches a tonometer incorporating an electrical measurement device comprising a means for optically activating an optical readout (the Infra red optical signal which is element 75 in Figure 2) and a means for receiving the optical readout (which can be viewed as display device 92 in Figure 1), to provide the system with a non-invasive way of activating the optical

readout that is relatively easy to use and monitor. It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the device Abita et al with an external instrument that has a means for optically activating the optical readout and a means for receiving the optical readout, as taught by Fresco, to provide the system with a non-invasive way of activating the optical readout that is relatively easy to use and monitor.

Regarding claim 32, the device as modified would be able to monitor the ambient atmospheric pressure, (see columns 12-14, lines 58-62 of Abita et al).

Regarding claim 33, the device as modified is capable of powering the device of claim 29.

Regarding claim 34, see Abita et al column 9, lines 46-56.

Claims 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abita et al in view of Abreu (6423001). Abita et al discloses the claimed method steps except for the self-checking of the intraocular pressure. Abita et al discloses the claimed invention that is disclosed in claim 35, for the external instrument see column 4, lines 27-39. Abreu teaches it is known to frequently self check the intraocular pressure for the detection of rises in pressure in individuals at any given point in time (see Column 3, lines 17-22). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Abita et al with a method step that included a step of self checking the intraocular pressure, as taught by Abreu, for the detection of rises in pressure in individuals at any given point in time.

Regarding claim 36, see rejection of claim 1 above.

***Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 3,406,681 Zandman discloses a method of determining the strain condition of the eye

U.S. Pat. No. 4,089,329 Couvillon Jr. et al discloses a noninvasive, continuous intraocular pressure monitor

U.S. Pat. No. 4,305,399 Beale discloses a miniature transducer

U.S. Pat. No. 5,179,953 Kursar discloses a portable diurnal intraocular pressure recording system

U.S. Pat. No. 6,939,299 Petersen et al discloses an implantable continuous intraocular pressure sensor.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Dryden whose telephone number is (571) 272-6266. The examiner can normally be reached on Monday-Friday 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MDD

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